

Notice of Allowability

Application No.

10/027,222

Examiner

Dwayne K. Handy

Applicant(s)

PARTHASARATHY ET AL

Art Unit

1743

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Appeal Brief filed 1/25/2005.
2. ☒ The allowed claim(s) is/are 1-42,44,45,53,54 and 64.
3. ☒ The drawings filed on 20 December 2001 and 03 October 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 1/14/2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Election/Restrictions

1. Claims 39-42, 44, 45, 53, 54 and 64 are directed to an allowable product.

Pursuant to the procedures set forth in the Official Gazette notice dated March 26, 1996 (1184 O.G. 86), claims 1-38, directed to the process of making or using the patentable product, previously withdrawn from consideration as a result of a restriction requirement, are now subject to being rejoined. Claims 1-38 are hereby rejoined and fully examined for patentability under 37 CFR 1.104.

Since all claims previously withdrawn from consideration under 37 CFR 1.142 have been rejoined, the restriction requirement made in the Office action mailed on 5/21/2003 is hereby withdrawn.

EXAMINER'S AMENDMENT

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Loren Albin on 4/15/2005.

3. The application has been amended as follows:

In claim 20, line 9, after the phrase "anion exchange material" the phrase -- partially coated with a negative polymer -- has been added.

Claim 65 has been canceled.

Allowable Subject Matter

4. Claims 1-42, 44, 45, 53, 54, and 64 are allowed.

5. The following is an examiner's statement of reasons for allowance:

Applicant has claimed a device and methods for removing small negatively charged organic molecules from a biological sample mixture. The device includes a plurality of process arrays with each process array being comprised of a plurality process chambers, at least one distribution channel connecting the plurality of process chambers and a surface having (1) an anion exchange material partially coated with a negatively charged polymer; or (2) quaternary ammonium ions partially coated with a negatively charged polyelectrolyte.

The method claims recite methods of removing small negatively charged organic molecules that include the following steps: (1) providing a device having a plurality of process arrays with each process array being comprised of a plurality process chambers, at least one distribution channel connecting the plurality of process chambers and a surface for removing small negatively charged organic molecules; (2) providing a biological sample mixture; and (3) contacting the biological sample mixture with the surface for removing small negatively charged organic molecules to remove at least a portion of the small negatively charged organic molecules from the sample mixture. In claims 1, 2, 20 and 21, the surface for removing small negatively charged

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organic molecules is comprised of an anion exchange material partially coated with a negative polymer. In claims 17, 18 and 36, the surface for removing small negatively charged organic molecules is comprised of quaternary ammonium ions partially coated with a negatively charged polyelectrolyte. Claims 1 and 20 also place a limitation on the molecular weight of the molecules in the sample. Claims 20 and 36 also add the step of transferring the biological sample within the process array.

The Examiner did not find prior art that teaches or suggests a device or method for removing small negatively charged organic molecules that ***includes or uses an anion exchange material partially coated with a negatively charged polymer or quaternary ammonium ions partially coated with a negatively charged polyelectrolyte***. The Examiner considers Gjerde to be the closest prior art. Gjerde teaches the use of anion exchange material and quaternary ammonium ions as separation media, but does not teach or suggest a partial coating

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dwayne K. Handy whose telephone number is (571)-272-1259. The examiner can normally be reached on M-F 8:00-4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571)-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DKH
April 15, 2005


Jill Warden
Supervisory Patent Examiner
Technology Center 1700